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## NOTICE OF ALLOWANCE AND FEE(S) DUE

20991 7590 01/14/2003

HUGHES ELECTRONICS CORPORATION  
PATENT DOCKET ADMINISTRATION  
BLDG 001 M/S A109  
P O BOX 956  
EL SEGUNDO, CA 902450956

EXAMINER

CHOW, CHARLES CHIANG

ART UNIT

CLASS-SUBCLASS

2684

370-316000

DATE MAILED: 01/14/2003

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/325,110	06/03/1999	CARL S. ANSELMO	PD-990033	2415

TITLE OF INVENTION: METHOD AND SYSTEM FOR PROVIDING SATELLITE COMMUNICATIONS USING ON-ORBIT PAYLOAD CONFIGURATION AND RECONFIGURATION

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1300	\$0	\$1300	04/14/2003

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.

☐ Applicant claims SMALL ENTITY status.  
See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Box ISSUE FEE**  
**Commissioner for Patents**  
**Washington, D.C. 20231**  
**Fax (703)746-4000**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

**CURRENT CORRESPONDENCE ADDRESS** (Note: Legibly mark-up with any corrections or use Block 1)

20991 7590 01/14/2003

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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Box Issue Fee address above, or being facsimile transmitted to the USPTO, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/325,110	06/03/1999	CARL S. ANSELMO	PD-990033	2415

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nonprovisional	NO	\$1300	\$0	\$1300	04/14/2003

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHOW, CHARLES CHIANG	2684	370-316000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 \_\_\_\_\_  
2 \_\_\_\_\_  
3 \_\_\_\_\_

## **3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)**

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) ☐ individual ☐ corporation or other private group entity ☐ government

4a. The following fee(s) are enclosed:

- ☐ Issue Fee
- ☐ Publication Fee
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s):

- ☐ A check in the amount of the fee(s) is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Commissioner is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

Commissioner for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

(Authorized Signature)

(Date)

**NOTE:** The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

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TRANSMIT THIS FORM WITH FEE(S)



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HUGHES ELECTRONICS CORPORATION PATENT DOCKET ADMINISTRATION BLDG 001 M/S A109 P O BOX 956 EL SEGUNDO, CA 902450956			CHOW, CHARLES CHIANG	
			ART UNIT	PAPER NUMBER
			2684	

DATE MAILED: 01/14/2003

**Determination of Patent Term Extension under 35 U.S.C. 154 (b)**  
(application filed after June 7, 1995 but prior to May 29, 2000)

The patent term extension is 0 days. Any patent to issue from the above identified application will include an indication of the 0 day extension on the front page.

If a continued prosecution application (CPA) was filed in the above-identified application, the filing date that determines patent term extension is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system. (<http://pair.uspto.gov>)

Any questions regarding the patent term extension or adjustment determination should be directed to the Office of Patent Legal Administration at (703)305-1383.



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			ART UNIT	PAPER NUMBER
			2684	

DATE MAILED: 01/14/2003

## Notice of Fee Increase on January 1, 2003

If a reply to a "Notice of Allowance and Fee(s) Due" is filed in the Office on or after January 1, 2003, then the amount due will be higher than that set forth in the "Notice of Allowance and Fee(s) Due" since there will be an increase in fees effective on January 1, 2003. See Revision of Patent and Trademark Fees for Fiscal Year 2003; Final Rule, 67 Fed. Reg. 70847, 70849 (November 27, 2002).

The current fee schedule is accessible from: <http://www.uspto.gov/main/howtofees.htm>.

If the issue fee paid is the amount shown on the "Notice of Allowance and Fee(s) Due," but not the correct amount in view of the fee increase, a "Notice to Pay Balance of Issue Fee" will be mailed to applicant. In order to avoid processing delays associated with mailing of a "Notice to Pay Balance of Issue Fee," if the response to the Notice of Allowance and Fee(s) due form is to be filed on or after January 1, 2003 (or mailed with a certificate of mailing on or after January 1, 2003), the issue fee paid should be the fee that is required at the time the fee is paid. If the issue fee was previously paid, and the response to the "Notice of Allowance and Fee(s) Due" includes a request to apply a previously-paid issue fee to the issue fee now due, then the difference between the issue fee amount at the time the response is filed and the previously paid issue fee should be paid. See Manual of Patent Examining Procedure, Section 1308.01 (Eighth Edition, August 2001).

Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

**Notice of Allowability**

Application No.

09/325,110

Examiner

Charles Chow

Applicant(s)

ANSELMO, CARL S.

Art Unit

2684

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to December/13/2002.
2. ☒ The allowed claim(s) is/are 1-8,10-13 and 15-31.
3. ☒ The drawings filed on 03 June 1999 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
  - (b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)          |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____             |
| 5 <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____               | 6 <input type="checkbox"/> Examiner's Amendment/Comment                             |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
|  | 9 <input type="checkbox"/> Other  |

Art Unit: 2684

*Office Action for Allowance -  
Applicant's amendment  
(December/13/2002)*

1. Claims 1-8, 10-13, 15-31 are allowable over the prior art of record.
2. The following is the examiner's statement for the reasons of allowance:

Claims 1-8, 10-13, 15-31 are allowable over the prior art of record because the cited references fails to disclose particularly, individually or in combination, the subject matter for a satellite system having plurality of satellites for uplink/downlink communication. Each satellite has a communication control circuit. At least one satellite is reconfigurable via the programmable frequency synthesizer according to the tuning information in the routing table, for reconfiguring the satellite's frequency configuration of the payload of the reconfigurable satellite, as shown in the independent claims 1, 15, 18, 28 below. The independent claims are also allowable due to their dependency upon the independent claims.

[claims 1, 15, 18, 28]

a system for providing high frequency data comm. in a satellite-based comm. network, the system comprising:

- a plurality of comm. satellites each having uplink and downlink antennas capable of receiving and transmitting a plurality of signals, each of said satellites having a comm. control circuit;
- at least one of said satellites being a reconfigurable satellite having a programmable frequency synthesizer coupled to a com control circuit;
- a routing table storing tuning information therein;
- a controller located on said satellite coupled to said comm. control circuit, said controller controlling a frequency reconfiguration of said comm. control circuit through said programmable frequency synthesizer in response to said tuning information.

A receive/transmit array; a receive/transmit beam forming network; a communication control circuit for controlling comm. of satellite

A reconfiguration circuit coupled to comm. control circuit for reconfiguring the comm. control circuit, said reconfiguration circuit comprising a programmable frequency synthesizer, an on-board computer and routing table having tuning information stored therein;

Reconfiguring the frequency configuration of the payload of the reconfigurable satellite, in response to the tuning information in the routing table.

Repositioning a satellite from a network position; and moving the reconfigurable satellite into the network position.

Art Unit: 2684

Considerations has been made to the following relevant prior arts:

Thompson et al. – (US 2001/0034,206 A1) discloses the reconfigurable satellite for reconfiguring the frequency configuration, by varying the first and second predetermined frequencies in the first and second synthesizers of the reconfigurable satellite (col. 5, lines 5-18; their claim 7, claims 11-16). Thompson teaches the single satellite to be reconfigured to mimic other satellite for backup the coverage without interrupting the service [0058].

Thompson teaches the reconfigurable satellite has various frequency plans that mimics various other payload ([0006], 0014)). The synthesizer is shown in [0024], [0047], Fig. 7, and in their claims 1, 7, 8, 11-16.

Rahnema- (US 5,430,729) teaches the routing table 90 for satellite 12 (in Fig. 3, Fig. 5, Fig. 7, col. 9, line 62 to col. 23; col. 10, line 65 to col. 11, line 4) for routing the call based on the routing code 74 (Fig. 2) to satellite at destination node (92, Fig. 5). The routing table is updated in next time interval (steps 112, 120 in Fig. 8). Rahnema teaches the frequency for routing table (as shown in col. 13, lines 18-31; col. 16, lines 31-36).

Sherman-'309 [a comm. system with plural satellites having the reconfiguring capability of bi-weekly minute-by-minute allocation plans and the frequency allocation, (abstract, figure in cover page, Fig. 4, Fig. 5, col. 11, lines 13-24; col. 9, lines 65 to col. 10, line 2; col. 10, lines 24-31)];

Floury-'845 [a programmable frequency synthesizer for changing the satellite's frequency, (col. 9, lines 28-38; col. 12, lines 29-46). The satellite has a controller for controlling the communication circuit, col. 4, lines 28-37, Fig. 4] ;

Art Unit: 2684

Brown-'621 [a satellite system having synthesizer 284, 308, and routing table 1120, Fig. 27/28, Fig. 85, 86, for adaptively routing the global call by selecting the best route pathway, for assigning the channel, (col. 17, lines 8-42; col. 43, line 46 to col. 44, line 9)] ;

Wiswell-'319 B1 [the beam forming network phase array antenna for selectively adjusting the amplitude and phase of the antenna beams, (abstract, col. 1, lines 5-9; col. 2, lines 27-30; fewer multi-beam antennas, (col. 1, line 65 to col. 2, line 2; col. 2, lines 8-15)] ;

Black-'561 b1 [the optimized multi-media TDMA switch having the dynamic bandwidth-on-demand for data communication, (col. 19, line 53=54; col. 19, line 55; col. 19, lines 11-14; col. 19, lines 17-25)] ;

Galvin-'927 [the satellites in low earth orbit, LEO. The satellites 50, the GEO 52, and the MEO in Fig. 6] ;

Reesor-'720 [the repositioning, reconfiguring the position, of the satellite according to the correction signal] ;

The prior arts are not disclosing the claimed features, singly, or in combinations, as shown above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee, and to avoid processing delays, should preferably accompany the issue fee. Such submission should be clearly labeled "comments on statement of reasons for allowance".

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (703)-306-5615.



Art Unit: 2684

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Hunter, can be reached at (703)-308-6732.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Charles Chow

January 10, 2002.

  
DANIEL HUNTER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600